

TITLE: Theoretical Differences: Exploring the Communication Barrier between Anthropology and Physics Education Research

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Abstract: A discussion of theory is not conducted in the same way across all disciplines of scholarly inquiry. For instance, the ways in which theory is developed and debated in anthropological discourse differs greatly from the ways in which theory is produced and argued in the field of physics education research (PER). The significant differences in how PER and anthropology conceptualize theory and utilize methodology have created a barrier in communication between the two fields, and this barrier has been preventing the fields of PER and anthropology from benefitting from each other's research. In this paper, I examine the conceptualization of theory and methodology in PER and in anthropology in order to explore the foundations of the barrier between the two fields and to explore how it might be overcome. First, I provide an overview of the theory and methodology of PER. Next, I describe the theory and methodology of anthropology and evaluate the ways in which anthropological thought and practice differ from those of PER. Finally, I offer suggestions for how anthropological theory and methodology could be incorporated into future PER research.

Keywords: Physics Education Research; Anthropology